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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,327	10/14/2003	Vincent Roy	I-2-0431.1US	8265

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EXAMINER

D AGOSTA, STEPHEN M

ART UNIT

PAPER NUMBER

2683

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/686,327	<b>Applicant(s)</b> ROY ET AL.	
	<b>Examiner</b> Stephen M. D'Agosta	<b>Art Unit</b> 2683	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-10 is/are allowed.
- 6) ☒ Claim(s) 1,5,11,13-15 and 17 is/are rejected.
- 7) ☒ Claim(s) 2-4,12 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Objections*

**Claim 2** objected to because of the following informalities: Step "h" is missing sub-step "i" (eg. it starts with sub-step "ii"). Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 5, 11, 13-15 and 17** rejected under 35 U.S.C. 103(a) as being unpatentable over Hayata US 6,240,298, and further in view of Kronestedt et al. US 6,298,096 (hereafter Hayata and Kronestedt).

As per claims 1, 11 and 15, Hayata teaches a wireless communication system, a method of reusing common physical channel (CPCH) timeslots to transmit user data (eg. dedicated physical channel (DPCH) signals) – see title, abstract, figures 1-2 and C1, L35 to C2, L9), the method comprising:

**But is silent on**

- (a) tagging each CPCH timeslot as being aggressive or non-aggressive;
- (b) limiting the power level for transmitting DPCH signals over the CPCH timeslots to a maximum power level;
- (c) if the number of CPCH timeslots is not greater than one, tagging the CPCH timeslots as being non-aggressive; and
- (d) if the number of CPCH timeslots is greater than one, tagging for each cell the CPCH timeslots to be reused to transmit DPCH signals as being aggressive, and tagging all others of the CPCH timeslots as being non-aggressive.

Kronestedt teaches controlling the power transmit levels for a system that has a tight frequency reuse pattern (eg. reuses channels and/or control channels which may interfere with neighboring cells - see Abstract, figures 1-6 and C2, L55 to C3, L47) which reads on letters a-thru-d above since his disclosure inherently involves monitoring/adapting power levels based on the frequencies "re-used" so as not to upset the delicate balance of the predetermined frequency plan. Hence Hayata's use of a control channel to transmit user data would upset said frequency plan and monitoring/limiting of transmit power levels would be required. The examiner notes the use of the terms "aggressive and non-aggressive" as merely being descriptions for the which control channels can be used without interfering with other cells (hence some would be used and others would not be used due to increased interference levels).

***With further regard to claim 11***, Hayata teaches a cellular communications system that inherently comprises a plurality of wireless transmit/receive units, a radio access network (see figure 2) **but is silent on** for collecting metrics associated with the quality of the CPCH timeslots and received power measured by the WTRUS and a database in which each CPCH timeslot is tagged as being aggressive or non-aggressive. Kronestedt teaches monitoring/controlling power levels for a system with tight frequency reuse pattern (see Abstract, figures 1-6 and C2, L55 to C3, L47) whereby one skilled would use a database to track the any reconfigurations based upon Hayata's teachings.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Hayata, such that CPCH timeslot are tagged as aggressive/non-aggressive; limiting the power level for transmitting DPCH signals; if CPCH timeslots is not greater than one, tagging the CPCH timeslots as being non-aggressive; if the number of CPCH timeslots is greater than one, tagging for each cell the CPCH timeslots to be reused to transmit DPCH signals as being aggressive, and tagging all others of the CPCH timeslots as being non-aggressive, to provide means for determining if the CPCH can be used and controlling/monitoring the amount of power used to transmit user data via the CPCH channel(s).

As per **claims 5 and 17**, Hayata teaches the method/system of claim 1/15 wherein the communication system is a time-division duplex (TDD) system and the cells are TDD cells (Hayata teaches a generic cellular communications system, figures 1a-d, that utilizes channels to transmit data and one skilled realizes that many different means are available to multiplex the data/channels, including FDD, TDD, etc.).

As per **claim 13**, Hayata teaches the system of claim 11 **but is silent on** wherein the CPCH timeslots are reserved to transmit broadcast channel (BCH) signals.

The examiner notes that Hayata teaches using the control channel to send voice/data signals. Hence one skilled would also adapt the system to allow for transmitting any signal via the control channel which reads on transmitting the BCH signals.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Hayata, such that the CPCH timeslots are reserved to transmit broadcast channel (BCH) signals, to provide means for sending any data via the CPCH (eg. if/when the network is congested, etc.).

As per **claim 14**, Hayata teaches the system of claim 11 wherein the CPCH timeslots are reused to transmit dedicated physical channel signals (title and abstract) **but is silent on** at a power level that does not exceed a maximum power level.

Kronsestedt teaches controlling the power transmit levels for a system that has a tight frequency reuse pattern (eg. reuses channels and/or control channels which may interfere with neighboring cells, see Abstract, figures 1-6 and C2, L55 to C3, L47) which reads on letters a-thru-d above since his disclosure inherently involves monitoring/adapting power levels based on the frequencies "re-used" so as not to upset the delicate balance of the predetermined frequency plan. Hence Hayata's use of a control channel to transmit user data would upset said frequency plan and monitoring/limiting of transmit power levels would be required. The examiner notes the use of the terms "aggressive and non-aggressive" as merely being descriptions for the

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which control channels can be used without interfering with other cells (hence some would be used and others would not be used due to increased interference levels).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Hayata, such that a power level that does not exceed a maximum power level, to provide means for minimizing interference when using the control channel(s) to send user data.

***Allowable Subject Matter***

**Claims 6-10 allowed.** The prior art of record does not teach the highly specific design disclosed in independent claim 6 and it is therefore novel in the examiner's opinion.

**Claims 2-4, 12 and 16** objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record does not teach the highly specific designs disclosed in these dependent claims and hence they are novel in the examiner's opinion

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Lee US 6,795,412
2. Cerwall et al. US 6,272,352
3. Yang et al. US 6,198,936
4. Grube et al. US 5,239,678
5. Sasuta US 5,235,598
6. Zdunek et al. US 4,870,408
7. Paavonen US 5,799,251

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 703-306-5426. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephen D'Agosta

